IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) An implantable endocardial lead having a longitudinal axis and extending between proximal and distal ends for use with a cardiac stimulation device, the lead comprising:

an electrical conductor within the lead extending between proximal and distal ends;

an active fixation electrode comprising an electrically active helix coaxial with the endocardial lead, coupled to the distal end of the electrical conductor, and movable between a retracted position fully within the lead and an extended position advanced beyond the distal end of the lead for effecting penetration into the myocardial tissue;

a generally planar bulkhead member extending transversely of the longitudinal axis and located proximally of the electrically active helix in the retracted position; and

a guide system located proximally of the [[active fixation electrode]] bulkhead member, the guide system comprising a spiral track member adapted to engage the active fixation electrode for rotating the electrically active helix about the longitudinal axis as the helix is moved between the retracted and extended positions.

2. (Currently Amended) An implantable endocardial lead having a longitudinal axis and extending between proximal and distal ends for use with a cardiac stimulation device, the lead comprising:

an electrically active housing comprising a tubular end region extending to a terminal rim at the distal end of the lead;

an electrical conductor within the lead extending between proximal and distal ends;

an active fixation electrode within and spaced from the electrically active housing and comprising an electrically active helix coaxial with the endocardial lead coupled to the distal end of the electrical conductor and movable between a retracted position fully

within the housing and an extended position advanced beyond the terminal rim of the housing for effecting penetration into the myocardial tissue;

a generally planar bulkhead member extending transversely of the longitudinal axis and located proximally of the electrically active helix in the retracted position; and

a guide system located proximally of the bulkhead member [[active fixation electrode]], the guide system comprising a spiral track member adapted to engage the active fixation electrode, for rotating the electrically active helix about the longitudinal axis as the helix is moved between the retracted and extended positions.

3. (Currently Amended) An implantable endocardial lead as set forth in claim 2 ~~wherein the electrically active housing further comprises:~~

~~a generally planar bulkhead member extending transversely of the longitudinal axis and wherein the tubular end region extends away from the bulkhead member to the terminal rim at the distal end of the lead; and~~

wherein the spiral track member of the guide system extends proximally away from the bulkhead member to a proximal rim distant from the bulkhead member; and

wherein the active fixation electrode comprises a conductive shaft having an outwardly projecting follower member slidably engaged with the spiral track member, the electrical conductor being coupled to a proximal end of the conductive shaft.

4. (Original) An implantable endocardial lead as set forth in claim 2 comprising:

an insulation sheath covering the electrical conductor, the sheath and the electrical conductor together defining an internal chamber extending from the proximal end to the distal end; and

an electrical connector being coupled to the proximal end of the electrical conductor.

5. (Original) An implantable endocardial lead as set forth in claim 2 and further comprising:

a resilient coupling mechanism for maintaining electrical continuity between the active fixation electrode and the electrically active housing throughout movement of the active fixation electrode between the retracted position and the extended position.

6. (Previously Amended) An implantable endocardial lead as set forth in claim 3 wherein the conductive shaft comprises:

an outer peripheral surface extending between the proximal end of the conductive shaft and a distal end of the conductive shaft;

an annular collar integral with the conductive shaft intermediate the proximal and distal ends and projecting radially from the longitudinal axis to an outer rim beyond the outer surface of the conductive shaft; and

a head portion coaxial with and extending distally from the annular collar and being of reduced diameter than the annular collar to define a distal annular shoulder at its intersection with the annular collar; and

wherein the spiral track member has an internal peripheral surface facing and slidably engaged with a part of the conductive shaft;

a compression spring intermediate between and engaged with the bulkhead member and with the distal annular shoulder;

the annular collar being distant from the bulkhead member when the active fixation electrode is in the retracted position and being proximate the bulkhead member when the active fixation electrode is in the extended position, the compression spring biasing the annular collar in a direction away from the bulkhead member.

7. (Original) An implantable endocardial lead as set forth in claim 2 wherein the active fixation electrode comprises an electrically active helix advanceable outward relative to the distal end of the conductor for effecting penetration into myocardial tissue;

8. (Original) An implantable endocardial lead as set forth in claim 2 and further comprising:

a therapeutic element integral with the active fixation electrode formed of a biocompatible matrix material being of sufficient rigidity to penetrate the myocardial tissue.

9. (Previously Amended) An implantable endocardial lead as set forth in claim 2 and further comprising:

a therapeutic element generally cylindrical in shape coaxial with and fixed on the distal end of the conductive shaft and formed of a biocompatible matrix material being of sufficient rigidity to penetrate the myocardial tissue.

10. (Cancelled)

11. (Cancelled)

12. (Original) An implantable endocardial lead as set forth in claim 2 wherein the active fixation electrode comprises an electrically active helix advanceable outward relative to the distal end of the conductor for effecting penetration into myocardial tissue; and wherein the electrically active housing comprises an electrically active collar coaxial with the helix at the distal end of the lead.

13. (Previously Amended) An implantable endocardial lead as set forth in claim 3 wherein the electrically active helix is fixed to a distal end of the conductive shaft.

14. (Previously Amended) An implantable endocardial lead as set forth in claim 3 wherein the guide system comprises:

a cylindrical guide member integral with and extending proximally away from the bulkhead member of the electrically active housing and having an inner facing peripheral surface; and wherein the spiral track member of the guide system is formed

into the inner facing peripheral surface of the cylindrical guide member and defined by opposed spaced parallel side walls.

15. (Previously Amended) An implantable endocardial lead as set forth in claim 3 wherein the guide system comprises:

a cylindrical guide member integral with and extending proximally away from the bulkhead member of the electrically active housing and having an inner facing peripheral surface; and wherein the spiral track member of the guide system is formed into the inner facing peripheral surface of the cylindrical guide member and defined by opposed spaced parallel side walls and a bottom wall connecting the side walls.

16. (Currently Amended) An implantable endocardial lead having a longitudinal axis for use with a cardiac stimulation device, the lead comprising:

an electrical conductor within the lead, the electrical conductor having proximal and distal ends;

an electrode coupled to the distal end of the electrical conductor;

a helix, coaxial with the endocardial lead and movable between a retracted position within the lead and an extended position advanced beyond a distal end of the lead for effecting penetration into myocardial tissue;

a generally planar bulkhead member extending transversely of the longitudinal axis and located proximally of the helix in the retracted position; and

a guide system, located proximally of the bulkhead member, comprising a spiral track member adapted to slidably engage an outwardly projecting follower member coupled to the helix for rotating the helix about the longitudinal axis as the helix is moved between the retracted and extended positions.

17. (Previously Presented) The implantable endocardial lead as set forth in claim 16 wherein the electrode comprises an electrically active housing comprising a tubular end region extending to a terminal rim at the distal end of the lead, wherein the helix is at least partially contained within and spaced apart from the electrically active housing when in the retracted position.

18. (Previously Presented) The implantable endocardial lead as set forth in claim 16 further comprising:

a therapeutic element formed of a biocompatible matrix material being of sufficient rigidity to penetrate the myocardial tissue.

19. (Previously Presented) The implantable endocardial lead as set forth in claim 16 wherein the helix is electrically active.

20. (Previously Presented) The implantable endocardial lead as set forth in claim 19 further comprising a conductive shaft coupled between the distal end of the electrical conductor and the helix, the conductive shaft having an outwardly projecting follower member slidably engaged with the spiral track member.

21. (Previously Presented) The implantable endocardial lead as set forth in claim 16 wherein the guide system further comprises:

a cylindrical guide member having an inner facing peripheral surface, wherein the spiral track member of the guide system is formed into the inner facing peripheral surface of the cylindrical guide member and defined by opposed spaced parallel side walls.

22. (Previously Presented) The implantable endocardial lead as set forth in claim 16 further comprising:

an insulation sheath covering the electrical conductor, the sheath and the electrical conductor together defining an internal chamber extending from the proximal end to the distal end; and

an electrical connector being coupled to the proximal end of the electrical conductor.